



BRAINWARE UNIVERSITY

Library
Brainware University
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Term End Examination 2024-2025
Programme – M.Sc.(ANCS)-2024
Course Name – Core Hardware & Troubleshooting
Course Code - MNC17201A (T)
(Semester I)

Full Marks : 40 Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

 $1 \times 10 = 10$

- 1. Choose the correct alternative from the following:
- (i) Name the primary mechanism used in a mechanical mouse.
 - a) Ball and rollers

b) Optical sensor

c) Capacitive touch

- d) Laser technology
- (ii) Select how an optical mouse tracks movement.
 - a) It uses a ball and rollers.

- b) It utilizes infrared light and sensors.
- c) It relies on capacitance changes.
- d) It employs magnetic fields.
- (iii) Trace the meaning of IRQ in the context of computers.
 - a) Interrupt Request Queue

b) Integrated Resource Quota

c) Interrupt Routing Query

- d) Interrupt Request
- (iv) Discover FAT in file system terminology.
 - a) File Allocation Table

b) File Attachment Test

c) File Authorization Token

- d) File Activity Tracker
- (v) How does the "Form Factor" of a motherboard influence its compatibility with computer cases?
 - a) It controls the speed of data transfer between the motherboard and CPU.
- b) It determines the motherboard's size and shape, ensuring it fits within specific case
- c) It determines the number of USB ports available on the motherboard.
- d) It affects the motherboard's capacity to support RAM.
- (vi) Identify the primary function of the Southbridge chipset on a motherboard.
 - a) To manage I/O operations and peripheral devices
- b) To control CPU-to-memory communication
- c) To supply power to the motherboard
- d) To render graphics on the display
- (vii) In power supply connectors, choose the voltage the red wire typically represents.
 - a) Ground (0V)

b) +5V

(ix)	c) +12V i) Illustrsate two common types of power supply t a) Linear and Switch Mode c) RAM and CPU Compare the terms "frame" and "resolution" in a) Frame refers to the outer screen border c) Frame relates to screen refresh rate What is the maximum speed of HDMI 2.0? a) 8 Gbps c) 28 Gbps	b) UPS and Inverter d) DVD and SSD	
Group-B			
	(Short Answer Ty		3 x 5=15
 Define overclocking in CPU. Explain the concept of resolution in the context of displays and how it impacts image quality. Explain about head actuator mechanisms of HDD. How does a computer mouse facilitate user interaction with a graphical user interface. Analyse the key features of AT and ATX SMPS standards. OR Explain the purpose of the Power Good (PG) signal in ATX power supplies. 		(3) e? (3) (3)	
	(Long Answer T	ype Questions)	5 x 3=15
8. C 9. E	Describe about a mechanical mouse and its work Compare between different RAID levels. Explain the color-coding of wires in power supply assembly. O Ilustrate about different sections of Desk Jet Prin	connectors and its significance in F	(5) (5) PC (5)